

WHAT IS CLAIMED IS:

1. A data frame distribution method wherein either one of at least two information processing apparatus interconnected by at least two communication lines distributes and transmits a data frame to either one of at least the two communication lines, the method comprising the steps of:

storing an amount of data frames transmitted to at least the two communication lines for each of at least the two communication lines;

generating a data frame to be transmitted;

comparing the stored amounts of data frames with each other;

selecting a communication line having the smallest stored amount of data frames; and

transmitting the generated data frame to the selected communication line.

2. A data frame distribution method according to claim 1, wherein said storing step stores a cumulative value of the number of bytes of data frames transmitted to each of at least the two communication lines, as the amount of data frames.

3. A data frame distribution method according to claim 1, wherein said storing step stores a cumulative value of the number of data frames transmitted to each of at least the two communication lines, as the amount of data frames.

4. A data frame distribution method according to

claim 1, wherein said transmitting step further includes a step of adding an amount of the generated data frame to the amount of data frames stored for the selected communication line.

5. A data frame distribution method wherein either one of at least two information processing apparatus interconnected by at least two communication lines distributes and transmits a data frame to either one of at least the two communication lines, the method comprising the steps of:

storing an amount of data frames transmitted to at least the two communication lines for each of at least the two communication lines;

storing line information of either one of at least the two communication lines;

generating a data frame to be transmitted;

adding an amount of the generated data frame to the amount of data frames stored for the communication line corresponding to the stored line information, and storing an addition result; and

transmitting the generated data frame to the communication line corresponding to the stored line information.

6. A data frame distribution method according to claim 5, wherein said transmitting step further includes the steps of:

comparing the amounts of data frames stored for each of at least the two communication lines with

each other;

selecting a communication line having the smallest stored amount of data frames; and

storing line information corresponding to the selected communication line.

7. A data frame distribution method according to claim 5, wherein said step of storing the amount of data frames for each of at least the two communication lines stores a cumulative value of the number of bytes of transmitted data frames, as the amount of data frames.

8. A data frame transmission/reception method wherein between at least two information processing apparatus interconnected by at least two communication lines, a data frame is transmitted/received to/from at least the two communication lines in a distributed manner, the method comprising the steps of:

in a transmission side data processing apparatus,

storing an amount of data frames transmitted to at least the two communication lines for each of at least the two communication lines;

generating a data frame to be transmitted;

comparing the stored amounts of data frames with each other;

selecting a communication line having the smallest stored amount of data frames; and

transmitting the generated data frame to the

selected communication line, and

in a reception side data processing  
apparatus,

receiving the data frame transmitted from the  
transmission side data processing apparatus.

9. A data frame transmission/reception method  
according to claim 8, further comprising the steps of:

in the transmission side data processing  
apparatus, counting the number of data frames  
transmitted at least the two communication lines; and  
inserting the counted value in the generated  
data frame as order information.

10. A data frame transmission/reception method  
according to claim 9, wherein said inserting step  
further counts up the counted value and inserts the  
count-up count in the data frame as the order  
information.

11. A data frame transmission/reception method  
according to claim 9, wherein said counting step counts  
the number of bytes of data frames transmitted to at  
least the two communication lines.

12. A data frame transmission/reception method  
according to claim 9, further comprising the steps of:

in the reception side data processing  
apparatus,

counting the number of data frames received  
from at least the two communication lines and  
processed;

comparing the order information inserted into the received data frame with the counted value; and

if the order information is coincident with the counted value, executing processing of the received data frame.

13. A data frame transmission/reception method according to claim 12, wherein if the order information is not coincident with the counted value, said comparing step compares the order information inserted into another data frame received from either one of at least the two communication lines with the counted value.

14. A data frame transmission/reception method according to claim 13, wherein if the order information inserted into all received data frames is not coincident with the counted value, said comparing step suspends processing until another data frame is received from either one of at least the two communication lines.

15. A data frame transmission/reception method according to claim 12, wherein said counting step counts up the counted value after execution of processing the received data frame.

16. A data frame transmission/reception method according to claim 12, wherein said step of executing processing of the received data frame includes a step of deleting the order information inserted into the received data frame.

17. A data frame reception method of receiving a data frame transmitted from either one of at least two information processing apparatus interconnected by at least two communication lines, via either one of at least the two communication lines, the method comprising the steps of:

counting the number of data frames received from either one of at least the two communication lines and processed, and storing the counted value;

receiving a data frame transmitted from either one of at least the two communication lines;

comparing order information inserted into the received data frame with the counted value; and

if the order information is coincident with the counted value, executing processing of the received data frame.

18. A data frame reception method according to claim 17, wherein if the order information is not coincident with the counted value, said comparing step compares the order information inserted into another data frame received from either one of at least the two communication lines with the counted value.

19. A data frame reception method according to claim 17, wherein if the order information inserted into all received data frames is not coincident with the counted value, said comparing step suspends processing until another data frame is received from either one of at least the two communication lines.

20. A data frame reception method according to claim 17, wherein said counting step counts up the counted value after execution of processing the received data frame.

21. A data frame reception method of receiving a data frame transmitted from either one of at least two information processing apparatus interconnected by at least two communication lines, via either one of at least the two communication lines, the method comprising the steps of:

storing line information corresponding to either one of at least the two communication lines, among information inserted into a data frame received from either one of at least the two communication lines and processed;

receiving a data frame from either one of at least the two communication lines;

judging whether the data frame was received from the communication line corresponding to the stored line information; and

if the data frame is received from the communication line corresponding to the stored line information, executing processing of the received data frame.

22. A data frame reception method according to claim 21, wherein if the data frame was not received from the communication line corresponding to the stored line information, said judging step suspends processing

until a data frame is received from the communication line corresponding to the stored line information.

23. A data frame reception method according to claim 21, wherein said step of executing processing of the receiving data frame stored line information inserted into the received data frame.